

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT				1. CONTRACT ID CODE	PAGE 1 OF 3 PAGES
2. AMENDMENT/MODIFICATION NO. <b>A057</b>	3. EFFECTIVE DATE <b>See Block 16.c</b>	4. REQUISITION/PURCHASE REQ. NO. <b>N/A</b>	5. PROJECT NO. (If applicable) <b>QA:NA</b>		
6. ISSUED BY U.S. Department of Energy Office of Civilian Radioactive Waste Management (OCRWM) 1551 Hillshire Drive, M/S 523 Las Vegas, NV 89134		7. ADMINISTERED BY (If other than Item 6) U.S. Department of Energy Office of Civilian Radioactive Waste Management (OCRWM) 1551 Hillshire Drive, M/S 523 Las Vegas, NV 89134			
8. NAME AND ADDRESS OF CONTRACTOR (No. Street, county, State and ZIP: Code)  <b>Booz-Allen &amp; Hamilton. Inc 8283 Greensboro Drive McLean, Virginia 22102-3838</b>				(✓)	9A. AMENDMENT OF SOLICITATION NO.
					9B. DATED (SEE ITEM 11)
				<b>X</b>	10A. MODIFICATION OF CONTRACT/ORDER NO. <b>DE-AC28-02RW12152</b>
					10B. DATED (SEE ITEM 13) <b>June 16, 2002</b>
CODE	FACILITY CODE				

### 11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended, ☐ is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:

(a) By completing Items 8 and 15, and returning one (1) copy of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATA SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and data specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

**N/A**

### 13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

(✓)	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
B.	THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
C.	THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
<b>X</b>	D. OTHER Specify type of modification and authority) <b>Unilateral modification IAW clauses H.20 "Ordering Procedure" and H.21 "Level of Effort"</b>

E. IMPORTANT: Contractor **X** is not, ☐ is required to sign this document and return \_\_\_ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

SEE SUMMARY OF CHANGES

EXECUTED  
COPY

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) <b>Spencer R. Peterson Contracting Officer</b>	
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA  BY  (Signature of Contracting Officer)	16C. DATE SIGNED <b>11/16/06</b>
(Signature of person authorized to sign)			

**Summary of Changes:**

1. The purpose of this modification are as follows:

- a. The new FY 07 set-aside amounts and total estimated amount of the contract is revised as follows:

From:	\$111,725,070.26
Increase:	<u>\$ 180,000.00</u>
To:	\$111,725,070.26

- b. Revise contract clause B.3 (last modification A055) to read as:

**B.3 ESTIMATED COST, BASE FEE, AND AWARD FEE**

Period of Performance: June 16, 2002 through January 31, 2007

Estimated Cost: \$105,911,752.73

Base Fee (Not to Exceed 2% of the Estimated Cost) \$ 0.00

Maximum Available Award Fee: \$ 5,813,317.53

Total Estimated Cost, Base Fee and Maximum

Available Award Fee: \$ 111,725,070.26

2. The following tasks are being issued under contract clause H-20 "Ordering Procedures":

- a. Task HQ07-02 "FY07 Total System Life Cycle Cost Estimate Support" COR for this task: Syed Bokhari. Period of Performance: Oct 2, 2006 through 31 January 2007.
- b. Task HQ07-02A "FY 07 Fee Adequacy Assessment Support" COR for this task: Syed Bokhari. Period of Performance: Oct 2, 2006 through 31 January 2007.

3. Tasks YM06-02A and YM06-2B are extended as follows:

- a. YM06-02A is hereby extended through January 31, 2007 at no additional cost.
- b. YM06-02B is hereby extended through October 31, 2006 at no additional cost.

4. FY 07 set-aside amounts and obligations are revised to read:

Task	Description	FY 07 Estimated \$	FY 07 Obligated \$	FY07 Unobligated \$
YM04-02A	Natural Analogs	\$0.00	\$0.00	\$0.00
HQ05-02E	Review of the TSPA	\$0.00	\$0.00	\$0.00
YM07-01	YM Base Task	\$2,871,000.00	\$2,871,000.00	\$0.00
YM07-01 LSN (4.4.3)	LSN Support (Op fund)	\$475,323.00	\$0.00	\$475,323.00
YM06-02A	Monitor Geological Repository Requirements Documents	\$0.00	\$0.00	\$0.00
YM06-02B	Cash Flow Analysis	\$0.00	\$0.00	\$0.00
HQ07-01	HQ Base Task	\$3,132,619.00	\$3,132,619.00	\$0.00
HQ07-01 International (4.9)	S&T Support (Op fund)	\$180,000.00	\$180,000.00	\$0.00
HQ 07-01 Transportation (4.11)	Transportation (Op Fund)	\$341,000.00	\$0.00	\$341,000.00
HQ06-02	Review of Tec Impacts	\$0.00	\$0.00	\$0.00
HQ07-02	Mgmt & Tech Spt Svcs	\$426,300.00	\$0.00	\$426,300.00
HQ07-02A	Mgmt & Tech Spt Svcs	\$200,200.00	\$0.00	\$200,200.00
<b>Total</b>		<b>\$8,422,105.00</b>	<b>\$6,979,782.00</b>	<b>\$1,442,823.00</b>

Note: The contractor is not authorized, without written prior approval from the Contracting Officer, to exceed the estimated set-aside amounts above (individually or as a whole). Any incurred or committed costs that exceed these set-aside table amounts, with prior written approval of the Contracting Officer, will not be paid or reimbursed.

**End of Summary of Changes**



U.S. DEPARTMENT OF ENERGY  
TASK ORDER

CONTRACTOR NAME AND ADDRESS:

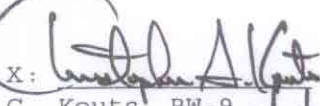
Richard L. Toft, General Manager  
Booz-Allen & Hamilton, Inc.  
8283 Greensboro Drive  
McLean, Virginia 22102-3838

CONTRACT NUMBER: DE-AC28-02RW12152

CONTROL NUMBER:


TASK ORDER NUMBER: ~~HQ06-03~~ <sup>HQP 10/12/06</sup> HQ07-02

Sub Service  
Managers

X:   
C. Kouts, RW-9

9/28/06

Contracting Officer's Rep

X: 

S. Bokhari

Date: 9.28.06

HQ-RW-516

(202) 586-2285

TITLE OF TASK ORDER: Management and Technical Support Services

DESCRIPTION OF WORK TO BE PERFORMED:

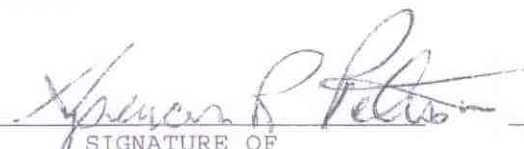
SCHEDULE OF PERFORMANCE/DELIVERABLES LIST AND DUE DATES: SEE ATTACHED PAGES.

NOTE: For each deliverable required by this Task Order, the Contractor shall submit to the Contracting Officer (CO) and to the Contracting Officer's Representative (COR) a copy of the transmittal letter which evidences timely receipt of the deliverable by the Department of Energy. A separate deliverable entitled "Final Task Status Report" shall provide totals of the cost, fee, and hours expended under this Task Order, and shall be provided to the CO, COR, and Service Manager within three months after the completion date of this Task Order.

PERFORMANCE: This Task Order covers the period of performance from October 2, 2006, through January 31, 2007.

THIS TASK ORDER IS ISSUED PURSUANT TO THE ORDERING PROCEDURES CLAUSE OF THE SUBJECT CONTRACT.

THE CONTRACTOR SHALL NOT BE PAID FOR WORK PERFORMED OR COSTS INCURRED UNDER THIS TASK ORDER PRIOR TO THE DATE OF THE CO'S SIGNATURE BELOW. IN ADDITION, THE CONTRACTOR IS NOT AUTHORIZED TO PROCEED BEYOND THE PERFORMANCE PERIOD OF THIS TASK ORDER, NOR WILL THE CONTRACTOR BE PAID FOR ANY COSTS INCURRED BEYOND THIS PERIOD, UNLESS THIS TASK ORDER IS REVISED BY THE CONTRACTING OFFICER TO AUTHORIZE ADDITIONAL PERFORMANCE AND PAYMENT.

  
SIGNATURE OF  
CONTRACTING OFFICER

10/12/06  
DATE

Spencer R. Peterson  
TYPE NAME OF  
CONTRACTING OFFICER

**Statement of Work**  
**Office of Civilian Radioactive Waste Management**  
**FY 2007 Total System Life Cycle Cost Estimate Support**

**September 2006**

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**1. Background**

The Total System Life Cycle Cost (TSLCC) is the Civilian Radioactive Waste Management Program's estimate of the cost to characterize, license, construct, operate, and decommission a repository for permanent geologic disposal of the Nation's spent nuclear fuel and high-level radioactive waste. The TSLCC supports the Secretary of Energy's annual Fee Adequacy assessment, which is required by the Nuclear Waste Policy Act, and the Department of Energy's calculation of defense liability resulting from disposal of its wastes in Yucca Mountain.

The Office of Civilian Radioactive Waste Management (OCRWM) Waste Management Office is responsible for producing the annual Fee Adequacy assessment. This includes overseeing the development of cost models and information management activities.

**2. Task Objectives**

The objectives of this task are to accomplish the development, integration, update, and maintenance of the TSLCC estimate for the OCRWM Program.

**3. Scope of Work**

The Waste Management Office requires support in the following areas:

- Developing the program-level assumptions and cost basis documents
- Integrating the transportation, repository, and program integration and institutional cost estimates
- Updating the cost estimates for Program Integration & Institutional
- Providing independent reviews of the transportation and repository costs
- Developing the Civilian Radioactive Waste Management Inflation and Interest Rate Report
- Updating historical costs
- Revising and maintaining a database that integrates TSLCC inputs and estimates for OCRWM
- Preparing draft briefing materials for senior management
- Conducting *ad hoc* analyses as needed to support program planning and strategy development

The contractor will be responsible for specific work scope as described in each of the following task areas:



## **Task 1      Interest and Inflation Rate Projections**

The contractor shall develop interest and inflation rate projections from several sources in order to support cost estimate integration and fee adequacy sensitivity analysis. Sources of data include, but are not limited to Ibbotson Associates historical average data, Global Insight economic forecast data, EIA Projected Average Rates and OMB economic guidance. The contractor shall acquire the data necessary for development of these projections. The results of these projections shall be documented in the Interest and Inflation Rate Report.

## **Task 2      Total System Life Cycle Cost Estimate**

The contractor shall assemble and integrate cost data for all of the Program elements, including contingency and historical costs, on a year-by-year basis throughout the life cycle of the Program in a database or spreadsheet model. The contractor shall maintain and present costs at levels of detail commensurate with needs for planning, budgeting, modeling and high-level analysis of alternatives and shall maintain and document bases of estimates. The contractor shall maintain cost and cost share allocation data in a database or spreadsheet and provide ready access to OCRWM staff and other contractors, as requested.

### **Subtask A      Update Estimate of Program Integration and Institutional Costs**

The contractor shall work with OCRWM staff and other contractors to update current cost estimates for the Program Integration & Institutional (PI&I) area, including program management and integration, quality assurance, benefits, and non-OCRWM costs. At the direction of DOE, the contractor shall conduct a major update of the PI&I cost estimate, re-estimating costs based on the latest program configuration. At the direction of DOE, the contractor will provide additional estimating expertise regarding a subset of elements (e.g., Payments-equal-to-taxes, Quality Assurance) to provide a more thorough update of PI&I cost estimate. The contractor shall work with the Office of Project Controls, Office of Quality Assurance, and Office of Government Services as needed to support the revision of this estimate.

### **Subtask B      Support to the Transportation Estimate**

The contractor shall work with the Office of Logistics Management and Waste Management Office staff and contractors to incorporate cost estimates for major elements of the transportation system, including Nevada Rail construction, fleet management facility construction, cask and equipment acquisition, and operations. The contractor shall review transportation cost estimates and assumptions for consistency with program/project schedules for the repository and shall integrate them into the TSLCC cost model.

### **Subtask C      Historical Actual Costs and Budgets**

The contractor shall obtain and assemble historical costs from 1983 through prior year closing costs. Historical costs will be adjusted upward by the historical inflation rates to make them consistent with the estimate in base year dollars. The contractor shall also organize historical costs in such a way to facilitate defense share calculations and forward-looking cost analyses.

The contractor shall report inconsistencies between budgets and cost estimates to DOE for resolution.

#### **Subtask D Cost Estimate Integration**

The contractor shall review and integrate cost estimates provided for the repository, transportation, and program management and integration program elements. The contractor shall review repository construction and operations cost estimates developed by other contractors and integrate them into a TSLCC cost model.

The contractor shall assemble costs in a spreadsheet or database model that is readily accessible by a wide range of users in OCRWM. Standardized project work breakdown structures shall be utilized wherever possible to facilitate Program-level cost analyses and reviews.

#### **Subtask E Assumptions Document, TSLCC Estimate, and Basis of Estimate Document**

At the direction of DOE, the contractor shall document the TSLCC estimate and results in three documents. First, the contractor shall document program-level assumptions for the repository, transportation, and waste acceptance in order to establish a common basis for developing the cost estimates. Second, upon completion of the cost estimate and as directed by DOE, the contractor shall prepare a summary report of the findings of the estimate activities. This document will summarize for a general audience the scope, schedule, and bases of costs included in the life cycle estimate. Third, the contractor shall provide basis of estimate documentation which includes assumptions, descriptions of scope, and unit costs where appropriate.

### **Task 3 Ongoing Analytical Support**

At the direction of DOE and if sufficient resources are available, the contractor shall provide ongoing analytical support, including responses to ad hoc queries and presentations, value engineering studies and systems analyses, and support for internal/external reviews and audits.

The contractor shall facilitate consistency and integration between transportation and repository cost estimate assumptions and models. The contractor shall also provide data integration support to other ongoing efforts, including input to and consistency checking with cost-related information in the Program Plan, Capital Asset Management Plan, program budgets, Annual Work Plans, Baselines, Critical Decision documentation, and the Total Systems Model.

#### **Subtask A Support to Independent Cost Estimate**

At the direction of DOE, the contractor shall support the conduct of an independent cost estimate of the life cycle cost estimate by an outside party. Support may include, but is not limited to, document assembly and preparation, meeting support, analysis of areas for reconciliation of costs, and facilitation of interactions among federal and contractor staff.

#### **Subtask B Risk Analysis**



As requested by DOE, the contractor shall conduct parametric risk analyses consistent with the maturity of cost and schedule data available. Possible studies include high-level, system-wide risk studies to define a range of likely costs over the various system phases (i.e., licensing and construction, operations, monitoring, and closure and decommissioning), and defining risk relationships between the waste acceptance, repository, and transportation elements.

Results of risk analyses will be provided to repository, transportation and program integration subject matter experts for integration into contingency calculations in the cost model. Where contingency calculations have not been provided, the contractor shall develop and incorporate them into the TSLCC estimate.

#### **Subtask C    Integration with Total System Model**

At the direction of DOE, the contractor shall support the integration of TSLCC data with the Total System Model. The contractor shall provide unit cost data and schedules to support the development of algorithms or programming within the Total System Model to produce total system cost outputs. Cost data and schedules shall be consistent with the latest life cycle cost data provided by the program elements.

#### **Subtask D    *Ad hoc* Analyses**

The contractor shall respond to ad hoc queries and conduct system cost studies. Additional studies may include but are not be limited to providing support to systems engineering studies, technology development evaluations, and sensitivity analyses.

#### **Task 4        Project Management**

The contractor shall meet with DOE staff and other contractors at least monthly to support development of cost estimates, to review the basis for current estimates, and to support decision making on assumptions and bases being used for the TSLCC. The contractor shall document the results of these meetings to track decisions and assignments.



#### 4. Summary

##### **Deliverables**

- TSLCC Assumptions Document
- Interest and Inflation Rate Report
- Transportation Cost Estimate
- Program Integration & Institutional Cost Estimate
- Updated Historical Costs
- Cost Model
- Integrated Program Life Cycle Cost Estimate
- Cost Estimate Documentation
- Draft & Final TSLCC Reports
- Briefing Materials
- *Ad hoc* Analyses

U.S. DEPARTMENT OF ENERGY  
TASK ORDER

CONTRACTOR NAME AND ADDRESS:

Richard L. Toft, General Manager  
Booz-Allen & Hamilton, Inc.  
8283 Greensboro Drive  
McLean, Virginia 22102-3838

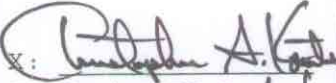
CONTRACT NUMBER: DE-AC28-02RW12152

CONTROL NUMBER:

TASK ORDER NUMBER: ~~HQ06-04~~

MA P 10/12/06  
HQ07-02A

Sub Service  
Managers

X:   
C. Kouts, RW-9 9/28/06

Contracting Officer's Rep

X: 

S. Bokhari

Date: 9.28.06

HQ-RW-516

(202) 586-2285

TITLE OF TASK ORDER: Management and Technical Support Services

DESCRIPTION OF WORK TO BE PERFORMED:


SCHEDULE OF PERFORMANCE/DELIVERABLES LIST AND DUE DATES: SEE ATTACHED PAGES.

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SIGNATURE OF DATE  
CONTRACTING OFFICER

Spencer R. Peterson  
TYPE NAME OF  
CONTRACTING OFFICER



**Statement of Work  
Office of Civilian Radioactive Waste Management  
FY 2007 Fee Adequacy Assessment Support**

**September 2006**

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**1. Background**

The Nuclear Waste Policy Act requires that the Secretary of Energy annually assess the adequacy of existing and projected monies in the Nuclear Waste Fund to support the life cycle of geologic disposal activities for the nation's inventory of spent nuclear fuel and high-level radioactive waste. This assessment is undertaken by the Office of Civilian Radioactive Waste Management (OCRWM) to satisfy this statutory requirement.

The OCRWM Waste Management Office is responsible for producing the annual Fee Adequacy assessment. This includes overseeing the integration of inputs from other OCRWM programs, development of financial models, and information management activities.

**2. Task Objectives**

The objectives of this task are to accomplish the development, integration, and maintenance of the Fee Adequacy assessment for the OCRWM Program.

**3. Scope of Work**

The Waste Management Office requires support in the following areas:

- Reviewing and integrating inputs into a model for analysis
- Revising and maintaining a model for assessing fee adequacy
- Calculating the share between civilian and defense costs
- Developing the draft and final Civilian Radioactive Waste Management Fee Adequacy Letter Report
- Preparing draft briefing materials for senior management
- Conducting *ad hoc* analyses as needed to support program planning and strategy development
- Support OMB Circular A-123 review of the defense share calculation

**Task 1 Defense Share Calculation**

At the direction of DOE, the contractor shall calculate the defense share of life cycle costs using the established federal register methodology. The contractor shall apply the methodology to repository, transportation, and program integration and institutional cost estimates. At the direction of DOE, the contractor shall perform sensitivity analyses on the cost share calculation to support the assessment of fee adequacy. The contractor shall document the approach and results of the analysis.

## **Task 2      Fee Adequacy Analysis**

The contractor shall assess the adequacy of Nuclear Waste Fund fees to ensure full recovery of the civilian share of life cycle costs at the direction of the Waste Management Office. The contractor shall work with federal staff and other contractors to define major inputs, including one-time fee payments, one mil per kilowatt hour payments, and life cycle costs. The contractor shall document all major processes and input data associated with this model and maintain them as necessary. The contractor shall prepare draft and final Fee Adequacy reports of sufficient quality and detail to address the requirement of the Nuclear Waste Policy Act to determine the sufficiency of NWF funds to cover costs of disposal of civilian SNF and HLW.

## **Task 3      Ongoing Analytical Support**

At the direction of DOE, the contractor shall provide ongoing analytical support; including responses to queries, presentations and support for internal/external reviews and audits. Support may include, but is not limited to, sensitivity analyses of the program Defense Outstanding Balance, support to Program input to Departmental financial statements, and support to Program activities to comply with the requirements of OMB circular A-123. At the direction of DOE, the contractor shall support the development of briefings to communicate the results of defense share and fee adequacy analyses.

## **4.      Deliverables**

- Defense Share Calculation and Documentation
- Draft Briefings on Defense Share Calculation and Analysis Results
- Fee Adequacy Model and Documentation
- Draft Fee Adequacy Assessment Letter Report
- Final Fee Adequacy Assessment Letter Report
- Draft Briefings on Fee Adequacy Assessment Results
- OMB Circular A-123 Process Control Documentation (Assessments, Test Plans and Results, Input Implementation Plans)